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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,403	07/31/2001	A. Russell Schindler	RTI 0101 PUS	3448

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EXAMINER

UPTON, CHRISTOPHER

ART UNIT

PAPER NUMBER

1724

DATE MAILED: 03/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

919403

Applicant(s)

Schindler

Examiner

Upm

Group Art Unit

1724

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☒ Responsive to communication(s) filed on 2/10/03

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1, 2, 5, 9, 10, 12-15 & 18-29 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1, 2, 5, 9, 10, 12-15 & 18-29 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received

in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Reference(s) Cited, PTO-892

☐ Notice of Informal Patent Application, PTO-152

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Other _____

Office Action Summary

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1. The use of the trademark "GeoProbe" has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

The "GeoProbe" process is not generically described in the specification.

2. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites airjet installation, but does not recite the steps comprising airjet installation.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 10, 12-15, 18-22 and 24-28 are rejected under 35 U.S.C. 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Perriello.

Perriello discloses a method and system for treating groundwater comprising the injection of bottled oxygen (see claim 15) and microbials (see claim 40) to multiple injection points, as claimed. While Perriello does not explicitly disclose operation without electricity or moving parts, it is submitted that these characteristics are inherent to bottled oxygen.

5. Claims 5, 23 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perriello.

Claims 5, 23 and 29 differ from Perriello in recitation of a grid of injection points. It is submitted that the positioning of injection points is a matter of site-specific process optimization, and therefore fails to patentably distinguish over Perriello.

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6. Claims 1, 15, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabata et al in view of Anthony et al.

Kawabata discloses the injection of microorganisms and oxygen (see claim 8) for groundwater treatment, substantially as claimed.

The claims differ from Kawabata in recitation of the use of liquid oxygen, which is vaporized without the need for electricity or mechanical parts. It is submitted that bottled oxygen is a well known source of oxygen, as disclosed by Anthony, and therefore would have been an obvious source of oxygen for the system of Kawabata, to avoid the need for a power source.

7. Claims 2, 5, 10, 12-14 and 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabata as applied to claims 1 and 15 above, and further in view of Udell et al.

Claims 2, 5, 10, 12-14 and 20-29 differ from Kawabata in recitation of a grid of plural injection points with independent controls. It is well known to provide such an array of injection points and controls for groundwater remediation, as exemplified by Udell (see figure 1). It would therefore have been obvious for one of ordinary skill in the art to use such an array with the systems of Kawabata, depending on the size and configuration of the contaminated site.

8. Claims 1, 2, 5, 10, 14, 15, 18, 19, 22-26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter in view of Anthony et al.

Carter discloses the injection of oxygen and microorganisms (see claim 3) for groundwater treatment, substantially as claimed. The claims differ from Carter in recitation of the use of liquid oxygen, which is vaporized without the need for electricity or mechanical parts. It is submitted that bottled oxygen is a well known source of oxygen, as disclosed by Anthony, and therefore would have been an alternative source of oxygen for the system of Carter, to avoid the need for a power source.

With respect to claims 5, 23 and 29, which recite of a grid of injection points, it is submitted that the positioning of injection points is a matter of site-specific process optimization, and therefore fails to patentably distinguish over Carter.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carter, Kawabata et al or Perriello as applied to claim 1, above.

Claim 9 differs from claim 1 in recitation of the method for installing the injection points being an airjet technique. It is submitted that the use of any known method for installing the injection points would have been an obvious matter of process optimization for one skilled in the art, depending on the site conditions, and therefore fails to patentably distinguish over the prior art, absent a declaration showing unexpected results.

10. Claims 1, 2, 5, 9, 10, 15, 18, 19, 22-26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keist et al in view of Anthony et al.

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Keist discloses the addition of microorganisms and oxygen (see column 4, lines 50-52) by fluid jetting, substantially as claimed.

The claims differ from Keist in recitation of the use of liquid oxygen, which is vaporized without the need for electricity or mechanical parts. It is submitted that bottled oxygen is a well known source of oxygen, as disclosed by Anthony, and therefore would have been an obvious source of oxygen for the system of Keist, to avoid the need for a power source.

11. Applicant's arguments filed on February 10, 2003 have been fully considered but they are not persuasive.

With respect to the 35 USC 112 rejections, applicant argues that GeoProbe is well known to one skilled in the art. It is submitted that this does not meet the requirement that it be accompanied by generic terminology. Applicant also states that claims 8 and 9 have been canceled. However, only claim 8 was canceled. With respect to the recitation of an airjet technique as recited in claim 9, it is submitted that, while the airjet technique has been described in the specification, the steps should be positively recited in the claim.

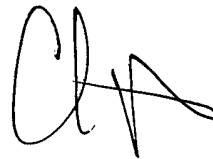
With respect to Perriello, applicant argues that Perriello does not teach an oxygen injection system that does not require electricity or mechanical parts, and does not teach conveying substantially pure oxygen to a regulating mechanism.

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It is submitted that claim 15 of Perriello recites that the source of oxygen gas is an oxygen cylinder, and that an oxygen cylinder inherently provides a supply of oxygen without the use of electricity or mechanical parts.

With respect to Kawabata, Carter and Keist, applicant argues that the references do not disclose a system that does not require electricity or mechanical parts. It is submitted that such oxygen delivery systems are known, as disclosed by Anthony, and would obviously have been applicable in any in-situ oxygen injection system, to avoid the need for electricity. It is noted that Anthony does disclose the use of an electric power source to operate an ozonizer. However, it is submitted that such an ozonizer would not have been necessary in a system where only oxygen is injected, as in the Kawabata, Carter and Keist systems, and that Anthony teaches that it is advantageous to use a system where the oxygenation system is free of power requirements.

12. Any inquiry concerning this communication should be directed to Christopher Upton at telephone number (703) 308-3741.

A handwritten signature in black ink, appearing to be 'CU' followed by a stylized flourish.

**CHRISTOPHER UPTON
PRIMARY EXAMINER**